REMARKS/ARGUMENTS

This paper is filed responsive to the Office Action mailed April 28, 2009. Claims 1, 3-13, 15-24, 26-36, 38-42, 44-50 and 52-57 are pending in the application. Claims 2, 14, 25, 37, 43 and 51 have been canceled. Claims 1, 19, 24, 26-36, 38-42, 44-50 and 52-57 are amended. Of these amended claims, claims 24, 26-36, 38-41, 44-49 and 52-57 have been amended only to correct misnumbered claims. This change is not for reasons of patentability, but a mere formality. Applicants respectfully request reconsideration and reexamination of the present application.

Claims 1-13, 15-36, 38-57 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker et al (US 4,193,397) in view of Karp (US *2003/0133358).*

The present invention is directed to an infusion apparatus and a method of infusing medication as represented by the pending claims. The apparatus includes a medication reservoir and a carrier reservoir. By separating these two reservoirs the overall size of the implantable apparatus can be reduced because relatively high concentrated medication can be contained in one reservoir while the carrier fluid, for example saline, is contained in the carrier reservoir. In addition, the number of times the patient would need a refill of the medication can be reduced. To achieve this goal, the medication and the carrier must mix in a mixing chamber sufficiently to allow for dilution of the medication and carrier fluids so that the patient will receive the proper dose. As illustrated in Figures 4A and 4B, in one embodiment the mixing chamber is a microfluidic chip 128. The chip includes a pathway 134 that includes convolutions to allow the medication sufficient contact time with the carrier to allow for thorough mixing. In addition, a bolus port 150 is disposed between mixing chamber 124 and outlet port 148. Bolus port 150 allows a doctor to introduce a bolus dose into apparatus 100, after medication 104 and carrier 108 have been mixed, but prior to the diluted mixture being discharged from apparatus 100.

As Applicant's pointed out in the originally filed specification, Tucker discloses a basal reservoir containing medication of a certain dosage and a smaller bolus

reservoir containing high concentrate medication. The basal reservoir discharges medication to the patient at a specified rate. The basal reservoir discharges the high concentration of medication to a smaller accumulator and, at a specified time, the accumulator discharges the bolus dose into the basal medication discharge. However, Tucker's bolus dose is never mixed and diluted with the basal dose. The bolus dose is sent as a short 'burst' of medication at timed or triggered intervals.

Independent claims 1, 19, 42 and 50 have been amended to include the limitations of dependent claims 2, 25, 43 and 51, respectively. Thus, the independent claims have been amended to make it clear that a bolus port is disposed between the mixing chamber and the outlet port, or that a bolus dosage is introduced into the diluted medication/carrier mixture prior to discharging the diluted medication/carrier mixture. Since Tucker's infusion apparatus already includes a bolus reservoir, one of ordinary skill in the art would not have found it obvious to add a completely redundant bolus port between the mixing chamber and the outlet port, as claimed in the present invention. Thus, the present invention is in condition for allowance and an early indication of such is respectfully requested.

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Applicants submit that the application is presently in condition for allowance and request favorable reconsideration and early notice of allowance. If it would speed prosecution, the Examiner is encouraged to contact the undersigned attorney by telephone.

Respectfully submitted,

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